## ATTACHMENT B Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1.-11. (Cancelled)

- 12. (New) A method for preparing a compound comprising a plurality of cucurbituril groups, the method comprising the steps of:
  - (a) forming a mixture comprising one or more compounds of the formula (1)

wherein:

L is a linking group; and each A is independently selected and is a group of the formula (A)

(A)

wherein:

## for each unit of the formula (B)

$$\begin{array}{c|c}
 & R^3 \\
 & N \\
 & R^2 \\
 & N \\
 & R^3
\end{array}$$

(B)

in formula (A),

and

R<sup>1</sup> and R<sup>2</sup> may be the same or different, and are each independently selected from a bond with L or

a univalent radical, or

R<sup>1</sup>, R<sup>2</sup> and the carbon atoms to which they are bound together form an optionally substituted cyclic group, or

R<sup>1</sup> of one unit of the formula (B) and R<sup>2</sup> of an adjacent unit of the formula (B) together form a bond or a divalent radical,

each R<sup>3</sup> is independently selected from the group consisting of =O, =S, =NR', =CXZ, =CZR', =CXR" and =CZ<sub>2</sub>, wherein Z is an electron withdrawing group, X is halo, and R' is selected from the group consisting of a bond with L, H, an optionally substituted straight chain, branched or cyclic, saturated or unsaturated hydrocarbon radical, or an optionally substituted heterocyclyl radical, and R" is a bond with L;

each R<sup>6</sup> is independently selected from the group consisting of a bond with L, H, alkyl and aryl;

R<sup>7</sup> and R<sup>8</sup> may be the same or different and are independently selected from the group consisting of H and –CHR<sup>6</sup>OR<sup>6</sup>, or R<sup>7</sup> and R<sup>8</sup> together form the group –CHR<sup>6</sup>-O-CHR<sup>6</sup>-, where each R<sup>6</sup> is independently selected from the group consisting of a bond with L, H, alkyl and aryl;

R<sup>9</sup> and R<sup>10</sup> may be the same or different and are independently selected from the group consisting of H and –CHR<sup>6</sup>OR<sup>6</sup>, or R<sup>9</sup> and R<sup>10</sup> together form the group –CHR<sup>6</sup>-O-CHR<sup>6</sup>-, where each R<sup>6</sup> is independently selected from the group consisting of a bond with L, H, alkyl and aryl; and

x is 0 or an integer from 1 to 10; provided that at least one  $R^1$ ,  $R^2$  or  $R^6$  is a bond with L or at least one  $R^3$  is =NR", =CZR" or =CXR" where R" is a bond with L; and an acid; and

- (b) exposing the mixture to conditions effective for at least some of the groups A to react to form cucurbituril groups, thereby forming a compound comprising a plurality of cucurbituril groups.
- 13. (New) A method according to claim 12, wherein step (b) comprises heating the mixture to a temperature from 20°C to 120°C.
- 14. (New) A method according to claim 12, wherein step (b) comprises contacting the one or more compounds of the formula (1) with a compound that can form bridges between groups A, and heating the mixture to a temperature from 20°C to 120°C.
- 15. (New) A method according to claim 14, wherein the compound that can form bridges between groups A is selected from the group consisting of compounds of the

formula R<sup>5</sup>COR<sup>5</sup> wherein each R<sup>5</sup> is independently selected from the group consisting of H, alkyl and aryl, compounds of the formula R<sup>5</sup>OC(R<sup>5</sup>)<sub>2</sub>OR<sup>5</sup> wherein each R<sup>5</sup> is independently selected from the group consisting of H, alkyl and aryl, trioxane, optionally substituted 3,4-dihydropyran and optionally substituted 2,3-dihydrofuran.

- 16. (New) A method according to claim 14, wherein the compound that can form bridges between groups A is formaldehyde.
- 17. (New) A method according to claim 12, wherein the mixture further comprises one or more compounds selected from compounds of the formula (6):

(6)

and compounds of the formula (2):

wherein:

for each unit of the formula (B):

$$R^3$$
 $R^1$ 
 $R^2$ 
 $R^3$ 
 $R^2$ 

(B)

in the compound of formula (2),

R<sup>1</sup> and R<sup>2</sup> may be the same or different, and are each a univalent radical, or

R<sup>1</sup>, R<sup>2</sup> and the carbon atoms to which they are bound together form an optionally substituted cyclic group, or

R<sup>1</sup> of one unit of the formula (B) and R<sup>2</sup> of an adjacent unit of the formula (B) together form a bond or a divalent radical,

and

each R<sup>3</sup> is independently selected from the group consisting of =O, =S, =NR, =CXZ, =CRZ or =CZ<sub>2</sub>, wherein Z is an electron withdrawing group, X is halo, and R is H, an optionally substituted straight chain, branched or cyclic, saturated or unsaturated hydrocarbon radical, or an optionally substituted heterocyclyl radical;

each R<sup>5</sup> in formula (2) is independently selected from the group consisting of H, alkyl and aryl;

R<sup>11</sup> and R<sup>12</sup> may be the same or different and are independently selected from the group consisting of H and –CHR<sup>5</sup>OR<sup>5</sup>, or R<sup>11</sup> and R<sup>12</sup> together form the group –CHR<sup>5</sup>-O-CHR<sup>5</sup>-, where each R<sup>5</sup> is independently selected and is as defined above,

R<sup>13</sup> and R<sup>14</sup> may be the same or different and are independently selected from the group consisting of H and –CHR<sup>5</sup>OR<sup>5</sup>, or R<sup>13</sup> and R<sup>14</sup> together form the group –CHR<sup>5</sup>-O-CHR<sup>5</sup>-, where each R<sup>5</sup> is independently selected and is as defined as above; and

y is 0 or an integer from 1 to 9;

and wherein at least some of the cucurbituril groups formed are formed from a group A of one molecule of the formula (1), a group A of at least one other molecule of the formula (1) and one or more molecules of formula (2) or (6).

- 18. (New) A method according to claim 17, wherein step (b) comprises heating the mixture to a temperature from 20°C to 120°C.
- 19. (New) A method according to claim 17, wherein step (b) comprises contacting the one or more compounds of the formula (1) with a compound that can form bridges between groups A, and between a group A and a compound of formula (2) or (6), and heating the mixture to a temperature from 20°C to 120°C.
- 20. (New) A method according to claim 19, wherein the compound that can form bridges between groups A, and between a group A and compound of formula (2) or (6), is selected from the group consisting of compounds of the formula R<sup>5</sup>COR<sup>5</sup> wherein each R<sup>5</sup> is independently selected from the group consisting of H, alkyl and aryl, compounds of the formula R<sup>5</sup>OC(R<sup>5</sup>)<sub>2</sub>OR<sup>5</sup> wherein each R<sup>5</sup> is independently selected from the group consisting of H, alkyl and aryl, trioxane, optionally substituted 3,4-dihydropyran and optionally substituted 2,3-dihydrofuran.

- 21. (New) A method according to claim 19 wherein the compound that can form bridges between groups A, and between a group A and compound of formula (2) or (6), is formaldehyde.
- 22. (New) A method according to claim 12, wherein R<sup>3</sup> is O and R<sup>6</sup> is H.
- 23. (New) A method according to claim 12 wherein L is a polymer.
- 24. (New) A method according to claim 12 wherein L is a group of the formula  $-(CR_2)_a-(E-(CR_2)_b-)_c(CR_2)_d$  or  $-(CR_2)_a-(E-(CR=CR)_b-)_c(CR_2)_d$  wherein:

E is –O-, -NR-, -S-, a saturated or unsaturated divalent hydrocarbon radical, or an optionally substituted aliphatic or aromatic divalent heterocyclyl radical; R is H, an optionally substituted straight chain, branched or cyclic, saturated or unsaturated hydrocarbon radical or an optionally substituted heterocyclyl radical; and a, b, c and d are each 0 or an integer from 1 to 30; provided that not all of a, b, c and d are 0.

- 25. (New) A method according to claim 12 wherein L is  $-(CH_2)_n$ -,  $-(CH=CH)_n$ -, -O-, -NH-,
- -CH<sub>2</sub>-NH-, -CH(CH<sub>3</sub>)(CH<sub>2</sub>)<sub>n</sub>CH(CH<sub>3</sub>)- or -(CH<sub>2</sub>)<sub>n</sub>-N(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>3</sub>)-(CH<sub>2</sub>)<sub>o</sub>-,

where n and p are an integer.

26. (New) A compound comprising a plurality of cucurbituril groups produced by the method of claim 12.